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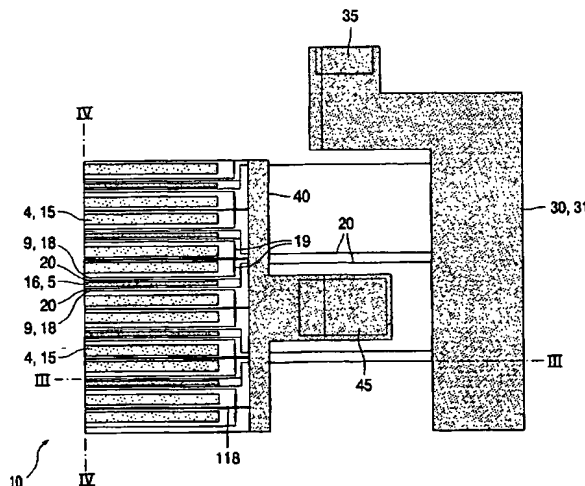
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[Continued on next page]

(54) Title: SEMICONDUCTOR DEVICE COMPRISING A FIELD-EFFECT TRANSISTOR AND METHOD OF OPERATING
THE SAME



(57) Abstract: The invention relates to in particular a lateral DMOST with a drain extension (8). In the known transistor a further metal strip (20) is positioned between the gate electrode contact strip and the drain contact (16) which is electrically connected with the source region contact (15). In the device proposed here, the connection between the further metal strip (20) and the source contact (15,12) comprises a capacitor (30) and the further metal strip (20) is provided with a further contact region (35) for delivering a voltage to the further metal strip (20). In this way an improved linearity is possible and the usefulness of the device is improved in particular at high power and at high frequencies. Preferably the capacitor (30) is integrated with the transistor in a single semiconductor body (1). The invention further comprises a method of operating a device (10) according to the invention.

**Declaration under Rule 4.17:**

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

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B. FIELDS SEARCHED

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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	DE 28 55 844 A (TEXAS INSTRUMENTS DEUTSCHLAND) 26 June 1980 (1980-06-26) the whole document	1-11
A	US 2002/033508 A1 (NAGURA KENICHI ET AL) 21 March 2002 (2002-03-21) the whole document	1-11
A	EP 0 309 748 A (SIEMENS AG) 5 April 1989 (1989-04-05) the whole document	1-11

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☒ Patent family members are listed in annex.

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Patent document cited in search report		Publication date		Patent family member(s)	Publication date
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